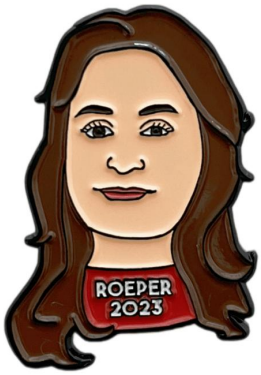
What’ s the best material for custom pins?

Wear a pin = show your stance!
Pick the wrong metal and you may end up with rust, extra weight, and a loss of that premium feel. Copper fans? Zinc lovers? Stainless steel warriors? Which one can brave the elements — and which is your true “destined metal”? Let’s uncover the truth!



1. Material face-off: Who takes the spotlight in custom pins?

Noble craftsman — Copper

Nickname: The gold standard of the pin world
Hold a copper pin in your hand and you immediately sense its quality. Red copper, brass, and rose copper each shine in their own way: red copper pairs perfectly with enamel pins and survives firing at 850°C without warping; brass performs beautifully with soft enamel and painted finishes, creating crisp, elegant lines.

Strengths: Warm shine, classic premium look, excellent corrosion resistance

Weak points: Higher cost (just behind gold and silver) and heavier weight due to density

Best for: Military pins, centennial commemorative pins, collector custom pins — for those who value tradition and prestige.

3D wizard — Zinc alloy

Nickname: The transformer of 3D pins
Dreaming of rotating gears or hollow, sculpted custom pins? Zinc alloy is your go-to. With a low melting point around 385°C, it's easy to cast into complex shapes, even thin 0.5 mm walls with mirror-like smoothness.

Strengths: Lightweight, unbeatable for 3D designs, budget-friendly

Weak points: Modest corrosion resistance — humidity may cause spots over time

Best for: Anime pins, event souvenir pins, promotional custom pins — when you want impact without overspending.

Steel hero — Stainless steel

Nickname: The rust-proof champion
While other metals may surrender to sea air, stainless steel pins stand firm. Even at just 0.5 mm thick, they're tough and ideal for full-colour printed pins, keeping designs sharp and vibrant.

Strengths: Waterproof, rust-resistant, durable, great value

Weak points: Cooler, harder feel; limited raised or sculpted effects

Best for: Outdoor activity pins, staff ID pins, charity and campaign pins — built to endure real-world use.

Budget master — Iron

Nickname: The great pretender
With electroplating, iron pins can mimic copper or brass at roughly one-third of the cost. But beneath the shine lies a risk: moisture quickly reveals rust, especially during shipping or storage.

Strengths: Very low cost, solid hardness

Weak points: Prone to oxidation when exposed to water

Best for: Short-term event pins, indoor decorative pins — fine when dry, risky when wet.

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2. Craft duel: Why enamel pins win collectors' hearts

Soft enamel pins feature raised metal lines and recessed colours, giving a textured, layered feel.
Hard enamel pins are polished smooth like glass, fired at high temperatures to create a surface that can last for decades without fading.
Fun fact: A true hard enamel pin can take up to **21 days** to complete — craftsmanship takes time.

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3. Smart choosing guide: Match materials to your needs

“I want an heirloom pin.” → Copper + hard enamel pins for museum-grade quality.

“I need premium look on a budget.” → Zinc alloy pins with soft enamel and plating.

“These pins will face rain and rough use.” → Stainless steel pins with printed designs for top rust resistance.

“I need 500 pins by tomorrow!” → Iron pins with painted finish — quick and cheap, but avoid moisture.

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4. Bonus: Fun facts about pin materials

Pure gold pins do exist — often reserved for prestigious awards, with prices rivaling a new car.

Most rebellious option: Lead–tin alloy, perfect for wild, irregular 3D sculpted pins.

Lightest choice: Aluminum pins — ideal for oversized pins that stay light on clothing.

Next time you order custom pins, smile at your supplier and say, “No iron pins — unless you add triple anti-rust treatment!” Because a truly great pin should still shine years later, letting you boast: “See this? It’s a legendary copper pin from back in the day.”